



US006287738B1

(12) **United States Patent**
Duff et al.

(10) **Patent No.:** US 6,287,738 B1
(45) **Date of Patent:** Sep. 11, 2001

(54) **PHOTOCONDUCTIVE IMAGING MEMBERS**

(75) Inventors: **James M. Duff; Ah-Mee Hor**, both of Mississauga; **C. Geoffrey Allen**, Waterdown; **Roger E. Gaynor**, Oakville; **Cheng-Kuo Hsiao**, Mississauga, all of (CA)

(73) Assignee: **Xerox Corporation**, Stamford, CT (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/578,381**

(22) Filed: **May 25, 2000**

(51) Int. Cl.⁷ **G03G 5/06**

(52) U.S. Cl. **430/59.1; 430/56; 430/78**

(58) Field of Search 430/59.1, 56, 78

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,121,006	2/1964	Middleton et al.	.....	96/1
3,871,882	3/1975	Wiedemann	.....	96/15
3,904,407	9/1975	Regensburger et al.	.....	96/15
3,972,717	8/1976	Wiedemann	.....	96/15
3,992,205	11/1976	Wiedemann	.....	96/16
4,265,990	5/1981	Stolka et al.	.....	430/59
4,419,427	12/1983	Graser et al.	.....	430/58
4,429,029	1/1984	Hoffmann et al.	.....	430/57
4,469,769	9/1984	Nakazawa et al.	.....	430/78
4,514,482	4/1985	Loutfy et al.	.....	430/78
4,517,270	5/1985	Graser et al.	.....	430/58
4,555,463	11/1985	Hor et al.	.....	430/59
4,556,622	12/1985	Neumann et al.	.....	430/58
4,587,189	5/1986	Hor et al.	.....	430/59
4,709,029	11/1987	Spietschka et al.	.....	544/125
4,719,163	1/1988	Staudenmayer et al.	.....	430/58
4,746,741	5/1988	Staudenmayer et al.	.....	546/37
4,937,164	6/1990	Duff et al.	.....	430/58
4,968,571	11/1990	Gruenbaum et al.	.....	430/58
5,019,473	5/1991	Nguyen et al.	.....	430/58
5,225,307	7/1993	Hor et al.	.....	430/136
5,645,965	7/1997	Duff et al.	.....	430/59
5,683,842	11/1997	Duff et al.	.....	430/59
6,051,351 *	4/2000	Hsiao et al.	.....	430/78
6,162,571 *	12/2000	Duff et al.	.....	430/78

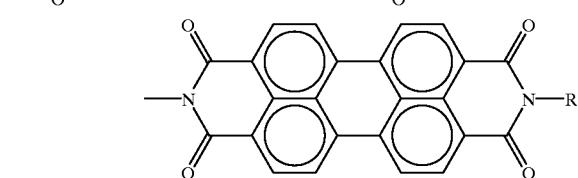
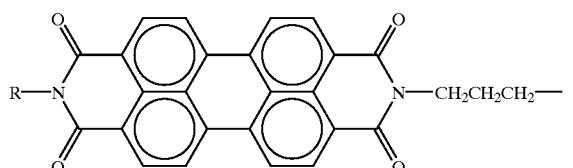
* cited by examiner

Primary Examiner—John Goodrow

(74) Attorney, Agent, or Firm—E. O. Palazzo

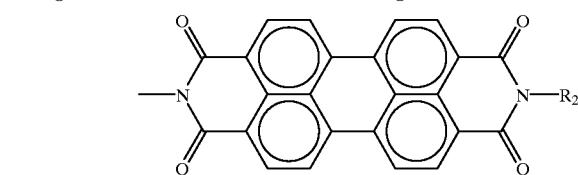
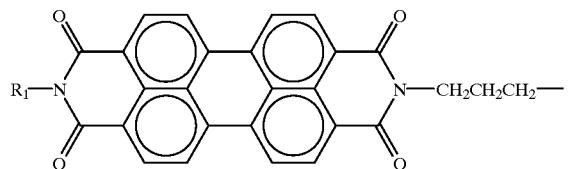
(57) **ABSTRACT**

A photoconductive imaging member comprised of a mixture of at least two symmetrical perylene bisimide dimers of Formula 1
Formula 1



wherein R is hydrogen, alkyl, cycloalkyl, substituted alkyl, aryl, substituted aryl, aralkyl or substituted aralkyl, and at least one terminally unsymmetrical dimer of Formula 2

Formula 2



wherein R₁ and R₂ are hydrogen, alkyl, cycloalkyl, substituted alkyl, aryl, substituted aryl, aralkyl, or substituted aralkyl, and wherein R₁ and R₂ are dissimilar.

56 Claims, No Drawings